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<u>Claims</u>

We claim:

- 1. A blood substitute composition comprising a modified hemoglobin, a crystalloid and an aqueous diluent, wherein said composition has an osmolarity greater than 800 mOsm/l and a hemoglobin concentration less than 6 g/dl.
- 2. The blood substitute composition of claim 1, wherein said composition has an osmolarity greater than 2000 mOsm/l.
- 3. The blood substitute composition of claim 1, wherein said crystalloid comprises sodium chloride.
- 10 4. The blood substitute composition of claim 1, wherein said modified hemoglobin comprises a polyalkylene oxide-hemoglobin conjugate.
 - 5. The blood substitute composition of claim 1, wherein said hemoglobin is selected from the group consisting of native hemoglobin and recombinant hemoglobin.